

STANDARDS DEVELOPMENT BRANCH OMOE



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THE
ONTARIO WATER RESOURCES
COMMISSION

REPORT
on a
GROUND-WATER SURVEY
for the
TOWN OF LATCHFORD

1966

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Report on a ground-water
survey for the town of Latchford

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ONTARIO WATER RESOURCES COMMISSION

REPORT ON FIELD INVESTIGATIONS

DATE OF EXAMINATION - **July 7 & 8, 1966.** PLACE - **Town of Latchford**

MATTER INVESTIGATED - **Ground-Water Survey**

AT REQUEST OF - **Town of Latchford**

INSPECTION MADE IN COMPANY WITH -

W. D. Morrison

OTHER PARTIES SEEN - **Mr. S. Bates, Reeve.**

Mr. G. Lefevre, Clerk.

REPORTS TO BE SENT TO -

J. R. Barr

A. K. Watt

P. G. Cockburn (3)

Surveys & Projects Branch (2)

OTHER RECOMMENDATIONS TO THE OFFICE RE PROCEDURE TO FOLLOW -

Mr. Cockburn has been supplied with copies of the report that can be forwarded to the municipality and consulting engineer at his discretion.

REPORT BY

E. Kilburn
E. Kilburn.

NOTE: This completed form to be attached to each report.

REPORT

Ontario Water Resources Commission

Municipality Town of Latchford Date of Inspection July 7 & 8, 1966.
Re: Ground-Water Survey
Field Inspection by W. D. Morrison, Geologist. Report by E. Kilburn, Geologist,

INTRODUCTION

The Town of Latchford in the District of Temiskaming is situated on a peninsula between Bay Lake and the Montreal River along highway No. 11. A request by the town for a provincial water works scheme, prompted an evaluation of ground-water conditions in the area to determine whether or not ground water could be utilized as a source of supply.

To evaluate ground-water conditions a field survey was carried out in the Town of Latchford on July 7 and 8, 1966. The field survey consisted of an examination of the topography, location of wells, collection of water samples and a general hydrogeologic reconnaissance of the area.

Population and Water Needs

The assessed population according to the 1966 municipal directory was 452. There is no major industry in Latchford and it is difficult to predict future population trends.

The average daily water requirement estimated on a basis of 100 gpd per capita would be in the order of 45,000 gpd or 30 gpm. To provide for some future growth and fire protection this figure could be doubled.

Existing Water Supplies

At present, water supplies in the Town of Latchford are obtained mainly from dug wells and some drilled wells. Many of the wells do not produce an adequate supply of water during dry summers. The residents generally use rain water for washing and cleaning purposes because of an inadequate water supply and the generally hard well water.

Well records are available in the Ontario Water Resources Commission offices for three wells drilled in Latchford.

HYDROGEOLOGY

Overburden

The overburden of the area is of glacial and fluvial origin. The overburden generally is a stony sand till. Field observations and the limited well records indicate that the overburden is very thin and consists of clay, sand, gravel and boulders.

A gravel pit southeast of Latchford contained fine sand at the surface, grading downward into coarser material, with boulders 3 to 5 feet in diameter around the extremities of the base. The surface sands were stratified and dipped to the southeast. This pit was at an elevation of about 1000 feet and did not contain any water.

A gravel pit, west of Latchford, near an abandoned mill site, contained dirty gravel with layers of sand. This pit is located about one mile from Latchford and approximately 1/4 mile from Bay Lake.

Bedrock.

The bedrock of the area is of Precambrian age. The rock types are quartzite and well bedded greywackes of the Firstbrook formation of the Huronian-Cobalt Group. The three drilled wells are reported to intercept "slate, hematite, and lava" according to the drillers' logs.

General Well Information.

The three records of drilled wells indicate shallow overburden from 5 to 16 feet thick. These wells are 2-inch diamond drill holes with low yields from 1/3 to 1 2/3 gpm. Only one of these wells is being used at the present time. The others have inadequate supplies.

Well data are listed on the accompanying table, and the locations are shown on the accompanying map.

The dug wells generally penetrate stony sand till and bottom on gravel. Dug wells range from 16 to 23 feet deep. The water is hard with a low iron content according to the residents.

Water Quality

Analyses of water samples show that the well water is moderately hard but that the iron is generally below the recommended upper limit of 0.3 ppm. One sample shows a chloride content of 851 ppm, which may be an indication of pollution. A sample of the water from Bay Lake had 25 ppm apparent colour units. A copy of the water analysis data is attached.

CONCLUSIONS

A ground-water survey was carried out to assess ground-water conditions in the Latchford area. A water supply in the order of 90,000 gpd would probably be adequate to meet the requirements of the town.

Field observations and hydrogeologic data indicate that ground-water conditions are poor and that this volume of ground-water is probably not available for municipal purposes in the immediate vicinity of Latchford. It is possible that

more favourable conditions may exist 2 to 3 miles from the town but no detailed hydrogeologic data are available to substantiate this. If an alternative source of water supply cannot be developed a limited test-drilling program could be carried out in the more remote areas following more detailed hydrogeologic investigations.

RECOMMENDATIONS

As there does not appear to be a reasonable chance of locating a ground-water supply in the immediate area of Latchford a surface-water supply should be considered for the proposed provincially-owned water works project.

If a ground-water supply is to be considered further for the Town of Latchford a more detailed examination of the hydrogeologic conditions in the more remote areas should be made and consideration given to a limited test-drilling program in areas of apparently thick overburden deposits. Test holes should be drilled to bedrock in order to evaluate all overburden aquifers.

All of which is respectfully submitted,

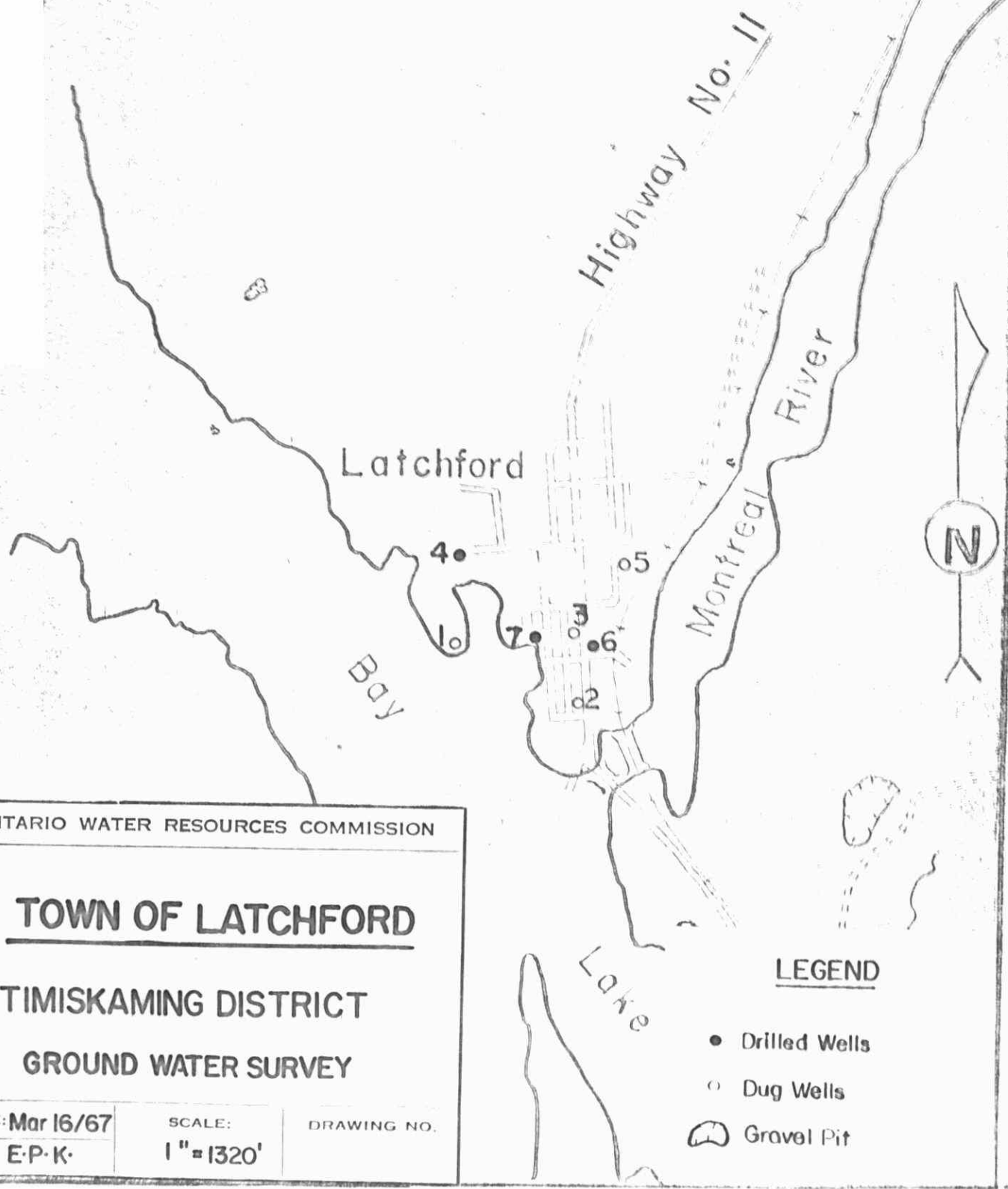
Prepared by: E. Kilburn,
Geologist.

Supervised by: T. J. Yakutchik,
Supervisor,
Surveys and Projects Branch.

Mar. 21/67

vs

.....
K. E. Symons, Director,
Division of Water Resources.



ONTARIO WATER RESOURCES COMMISSION

TOWN OF LATCHFORD

TIMISKAMING DISTRICT

GROUND WATER SURVEY

DATE: Mar 16/67

SCALE:

DRAWING NO.

BY: E.P.K.

1" = 1320'

LEGEND

● Drilled Wells

○ Dug Wells

⬭ Gravel Pit

AREA OF SURVEY LATCHFORD
District TEMISKAMING
COUNTY

ONTARIO WATER RESOURCES COMMISSION

TABLE OF WATER WELL RECORDS

DATE June, 1966
RECORDER E. P. K.

RECORDER E. P. K.

[illegible]

WATER ANALYSIS

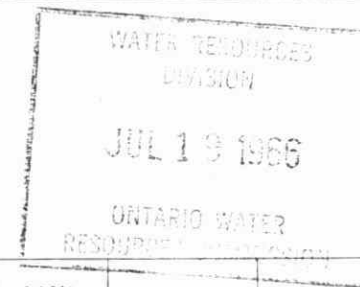
All analyses except pH reported in
mg/l. unless otherwise indicated

1 p.p.m. = 1 mgm. / litre
= 1 lb./100,000 Imp. Gals.

Municipality: Town of Latchford Report to: W.D. Morrison *

Source: As Below

Date Sampled: July 9/66 by: W.D. Morrison



C.C. Chem. Lab.-*
A.B. Redekopp
General Manager*

Sample No.	Electrodes as CaCO ₃	Alkalinity as CaCO ₃	Iron as Fe	Chloride as Cl	pH at Lab.	Fluoride as F	Apparent Colour Units	Turbidity Units		
-4730	208	191	0.07	4	7.5		---			
-4731	30	19	0.21	1	7.9		25			
-4732	490	243	0.12	851	7.3		---			
-4733	140	159	1.59	14	8.0		---			
-4734	262	270	0.31	22	7.6		---			

- 4730 #1 Leo Rabillard - Latchford. Dug Well
- 4731 #2 Stan Bates - Latchford. Montreal River
- 4732 #3 Lionel St. Jean - Latchford. Dug Well
- 4733 #4 J.L. Proulx - Latchford. Drilled Well
- 4734 #5 H. Switzer - Latchford. Dug Well

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Ontario Water Resources Co
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